

# /// LE'VZ 200/300 OOP ///

JUNE 1986. #12 \$1.00. J.C.E.D'ALTON. 39 Ames St. TOOWONG. QLD. 4066.  
AUSTRALIA.

Hi OOPs,

By the time you read this I will be doing my jogging and exercising seriously to be in shape for my skiing on Mt.Hotham in Victoria. Ahh-- to get away from the Queensland heat for a few days.

If there is anyone else likely to be skiing down there Perhaps we could meet up. I will be there at the end of July, so if you are interested in talking a LITTLE about computers, let me know.

I have had a few good compliments about LE'VZ, which is very gratifying. I thank those OOPs very much.

Bob Kitch, Larry Taylor and I had a little Pow-wow during Easter about the VZ and LE'VZ and have come up with some new ideas which should make LE'VZ even better with their help. I have received more contributions but would like more. Don't be afraid to let other folk know what you are doing with the VZ.

There are some who have added a full size keyboard, voice synthesiser, extra RAM memory and so on. And of course there are others who write good software. But the majority seem to be content to just play games (someone elses), what a pity. Programming in BASIC is not that hard. Like learning any language, Practice (in this case, at the keyboard) and determination is what is required. Give it a go!!

My recommendation is to fasten down by screwing or clamping the entire system, computer- VZ DTR- Power Packs and disc drive (if any) to a base board. This can be a piece of five ply with rubber feet underneath. Or an old upturned cupboard drawer, where the Power Packs can be clamped up underneath.

The object is to ensure very little movement of the pieces. The way some folk have the RAM unit flopping around amazes me. No wonder their system crashes from time to time. Once this has been done the real pleasure of computing comes to light.

Some folk do have trouble with heat apparently causing crashes, but this seems to apply to the early VZ 200s. I have a VZ 200 which among other things, plays the door chime, and it is running 24 hours per day and crashes very rarely (once a fortnight/week). Admittedly it does not have the RAM pack plugged in causing more current drain, but I think it does demonstrate that the VZ can be used for long periods.

Now that you have set up the VZ correctly, would you like to really put it to some very useful purposes. The things that you may know that the Commodore, Atari, BBC, Microbee, Apple and others can do. Such as:--

Would you like to "talk" to other VZ owners and other computers???

Would you like to use the VZ in an alarm system???

Would you like to run serious/useful software like data bases or financial packages???

Would you like to talk to other "HAMs" via Radio Teletype???

Would you like to listen to international RTTY diplomatic and news services???

Would you like to use computer bulletin boards???





I hope I have stirred your imagination, because all these things are available via the VZ. There are a few Pieces of hardware available from D.S.E. which will allow some of these things to be done. But don't expect any of the D.S.E. staff to get these things going for you, they have good intentions but not the expertise or the time to spend with you.

There have been construction articles in the various magazines covering these items, refer to Bob Kitch's list. There are other OOPs who have the experience to help those who need it. I hope to print articles on these pieces of hardware in future LE'VZs.

So I repeat, if you can contribute something, PLEASE send it to me for inclusion in LE'VZ.

David Newcombe of 928-960 Beenleigh to Redland Bay Rd., CARBROOK QLD 4130. is a hardware chap who has been building Pieces of hardware for the MicroBee, and has now entered the VZ scene. He has built up RAM Packs which the purchaser can fit more RAM I/Os as available cash is found. A fully finished 18K Pack for the VZ300 in the D.S.E. box costs approximately \$70.00.

Another unit which is a ROM board can be fitted inside the RAM Pack. It means that Programme/s that you use often are "burnt into" an EPROM and fits in the cartridge memory area at 4000H - 6000H. No need to have to load in the Programme/s when needed. David envisages that the ROM capacity could be taken to 144K. YES 144K !!!

Price of a 64K ROM Pack with menu EPROM approx \$55.00.

David also has a Buffer Board which buffers the address, data, and some signal lines. This is necessary if more than a couple of external devices are connected to the VZ. Such as Printer, Joystick, disc drive. If a buffer is not fitted and you are experimenting by connecting a device to the VZ, you can damage it as the Z80 microProcessor can only drive so many devices. Price approx \$60.75.

David needs to know what quantities of all the items are required by OOPs so that a better Pricing structure can be arrived at. Contact myself or David directly and let him know that you are an OOP.

With this LE'VZ I include a "liftout page" of Bob Kitch's list. I (we) hope you like LE'VZ even more. There is a lot more to come, so keep tuned in ...er... keep reading LE'VZ.

GOD BLESS. John D'Alton.

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**DICK SMITH  
ELECTRONICS**

DICK SMITH ELECTRONICS NEW ZEALAND.

A few days I recieved a very welcome letter replying to one which I wrote to Mr Yann Duran, who is the Computer Products Manager of N.Z.

He will give me as much support as possible, in relation to LE'VZ and VSOFTWAREZ software. The same applies in the reverse as I presently do for D.S.E. of Australia. More about this matter in the next LE'VZ. I wish to stress to New Zealand VZ users that they contact Mr Duran at the Head Office, 260 Khyber Pass Rd, AUCKLAND, Phone 396-495 for help in any matter. He wants to give VZ users all the support that is possible. He has much of our data:- software and LE'VZ at his disposal, and soon demonstration tape and discs of our software.

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This PROGRAMME, MEAN STREETS by Bob Chappel was sent in by Bob Davis of Mildura.

```

1 RANDOM:REM INVISIBLE COMMAND
2 CLEAR 200
5 REM MEAN STREETS BOB CHAPPEL   U2 200
VERSION BY A.LOCK
20 D$=" A CLUE. ":N$="  NOTHING! "
21 PK$="      PLEASE TYPE NUMBERS.
"
25 SL$=CHR$(31)+" THE SLEUTHS "
26 SP$=CHR$(31)+" THE SUSPECTS "
27 R$=" REVEALS"+CHR$(10)
30 WP$=CHR$(31)+" THE WEAPONS "+CHR$(10)
31 PL$=CHR$(31)+CHR$(10)+CHR$(10)+" THE
LOCATIONS "+CHR$(10)
35 AN$=" HERE'S LOOKING AT YOU KID! ":WR
$=" PLAY IT AGAIN SAME!!"
40 DIMH(12),E(15,4):Z=RND(1000)
45 FORN=1T09:READT$(N):NEXT:FORN=1T09:RE
ADS$(N):NEXT
50 FORN=1T09:READW$(N):NEXT:FORN=1T09:RE
ADL$(N):NEXT
55 DATA"SHERLOCK","KOJAK","COLUMBO","DR
WATSON","MAIGRET"
56 DATA"INSP. CLOUSSEAU","JIM ROCKFORD",
"DAN TANNER","MS MARPLE"
65 DATA"JOHN D'ALTON","PLAYBOY'S EDITOR",
"TEA LADY","CLEANER"
66 DATA"BOB HAWKE","IDA BUTTROSE","DICK
SMITH"
67 DATA"OSSIE OSTRICH","PETER RABBIT"
80 DATA"LETTER BOBB","VIC RAIL COFFEE",
"COLT 45","MALLETT"
82 DATA"POISON FRUIT CAKE","LASER GUN"
83 DATA"KILLER SNOOPY","CHRIS'SOCKS","EL
ECTRIC SHOCK"
90 DATA"CIVIC BUILDINGS","THE MURRAY","A
WATERBED","APEX PARK"
95 DATA"PSYCHE BEND","MO2 OVAL","MILDURA
STATION"
96 DATA"TARGET","OLYMPIC POOL"
110 CLS:PRINT" MEAN STREETS "
111 PRINT:PRINT:INPUT"YOUR NAME PLEASE";
XX$
112 PRINT:PRINT:PRINT"WHICH LEVEL (1-3)?
"
115 INPUTA$
120 LU=INT(UAL(A$)):IFLU<10RLU>3,110
125 PRINTSL$:FORN=1T09:PRINTN;T$(N):NEXT
130 PRINTPK$:FOR N=1 TO 4
135 IFN=1,A$="I AM - "
140 IF N=2,A$="YOU ARE -"
145 IFN=3,A$="1ST ROOKIE IS - "
150 IFN=4,A$="2ND ROOKIE IS - "
155 PRINTCHR$(10);A$;
157 IF N=2,T$(T(2))=XX$:GOTO 175
160 GOSUB865:IFA<10RA>9,160
165 FORN=1T04:IFT(N)=A,160
170 NEXT:T(N)=A
175 PRINTT$(T(N));
180 IFN=1,PRINT" OF PINKERTON'S";
185 PRINT".":NEXT:PRINT:GOSUB875
190 PRINTSP$:FORN=1T09:PRINTN;S$(N):NEXT
195 PRINTPK$;:FORN=1T06:IFN<6,PRINT" SUS
PECT"N"IS ";
200 IFN=6,PRINT:PRINT"      THE VICTI
M IS:-
"
205 GOSUB865:IFA<10RA>9,205
210 FORN=1T06:IFS(N)=A,205
215 NEXT:S(N)=A:PRINTS$(S(N));
220 PRINT".":NEXT:GOSUB 875
225 PRINTWP$:FORN=1T09:PRINTN;W$(N):NEXT
230 PRINTPK$;PRINTWP$(10);:FORN=1T05:FF
INT"WEAPON"N"IS A ";
235 GOSUB865:IFA<10RA>9,235
240 FORN=1T05:IFW(N)=A,235
245 NEXT:W(N)=A:PRINTW$(W(N));".":NEXT:G
OSUB875
250 PRINTPL$:FORN=1T09:PRINTN;L$(N):NEXT

```

```

255 PRINTPK$:PRINTCHR$(10):FORN=1T05:PRI
NT"LOCATION"N"IS ";
260 GOSUB865:IFA<10RA>9,260
265 FORN=1T05:IFL(N)=A,260
270 NEXT:L(N)=A:PRINTL$(L(N));".":NEXT:GO
SUB875
275 CLS:PRINT:PRINT"      A SCREAM IN THE
NIGHT!!
":SOUND14,8
280 FORN=1T05:SS(N)=S(N):S(N)=0:NEXT:FOR
N=1T05
285 Z=RND(5):FORN=1TON-1:IFS(N)=SS(7),
285
290 NEXT:S(N)=SS(2):NEXT
295 FORN=1T05:WW(N)=W(N):W(N)=0:NEXT:FOR
N=1T05
300 Z=RND(5):FORN=1TON-1:IFW(N)=WW(2),
300
305 NEXT:W(N)=WW(7):NEXT
310 FORN=1T05:LL(N)=L(N):L(N)=0:NEXT:FOR
N=1T05
315 Z=RND(5):FORN=1TON-1:IFL(N)=LL(7),
315
320 NEXT:L(N)=LL(7):NEXT
325 A=1:FORN=1T04:E(0,A)=S(N):E(A+1,0)=W
(N)+10:E(A+2,0)=L(N)+20
326 A=A+3:NEXT
330 FORN=1T012
335 Z=RND(12):FORN=1TON-1:IFH(N)=E(7,0
),335
340 NEXT:H(N)=E(7,0):NEXT
345 FORN=1T05:E(N,0)=N:E(N+5,0)=N:E(N+10
,0)=N:NEXT
350 FORN=1T05:FORN1=1T03:IFH(N)=SS(N),F
ORZ=1T04:E(N,Z)=1:NEXT
355 NEXT:FORN1=1T03:IFH(N)=WW(N)+10,FOR
Z=1T04:E(N+5,Z)=1:NEXT
360 NEXT:FORN1=1T03:IFH(N)=LL(N)+20,FOR
Z=1T04:E(N+10,Z)=1:NEXT
365 NEXT:NEXT:CLS
366 PRINT:PRINT:PRINT" YOUR CLUES,"T$(T
(7))":
":FORN=1T06:PRINT

```

```

370 IFH(N)>20,PRINTL$(H(N)-20):GOTO385
375 IFH(N)>10,PRINTW$(H(N)-10):GOTO385
380 PRINTS$(H(N))
385 NEXT:GOSUB875
390 CLS:PRINT:PRINTT$(T(2));".":PRINT
391 PRINT" HAVE YOU SOLVED IT (Y/N)? ":G
OSUB865
395 IFA$="Y",XX=1:CLS:PRINTCHR$(10):PRIN
T" THE DENOUNCEMENT?? "
396 IFA$="Y",PRINT:PRINT:GOTO430
400 CLS:PRINT:PRINT" WHICH SLEUTH WILL Y
OU GRILL? "
405 PRINT:PRINT:PRINT"1 ";:PRINTT$(T(1))
406 PRINT:PRINT"2 ";:PRINTT$(T(3))
407 PRINT:PRINT"3 ";:PRINTT$(T(4))
410 GOSUB865:IFA<10RA>3,410
415 IFA<1,A=A+1
420 A1=A
425 CLS:PRINTCHR$(10)
430 FORN=1T05:PRINTN;S$(SS(N)):NEXT:PRIN
T
431 PRINT" YOU SUSPECT? "
435 GOSUB865:A2=A
440 IFA<10RA>5,435
445 CLS:PRINTCHR$(10):PRINTCHR$(10)
446 FORN=1T05:PRINTN;W$(WW(N)):NEXT:PRI
NT
447 PRINT" WHICH WEAPON? "
450 GOSUB865:A3=A
455 IFA<10RA>5,455
460 CLS:PRINTCHR$(10):PRINTCHR$(10)
461 FORN=1T05:PRINTN;L$(LL(N)):NEXT:PRI
NT
462 PRINT" WHERE? "
465 GOSUB865:A4=A
470 IFA<10RA>5,465
475 Z=2:GOSUB480:GOTO515
480 CLS:PRINTCHR$(10):PRINT" THE MURDER
OF ";S$(S(6))" "
485 IFXX=1,PRINT:PRINT

```

TO BE CONTINUED NEXT LEV2.

Y2200 RAM PACK FOR Y2300.

If you update from the Y2200 to the Y2300, the Y2200 RAM Pack can be modified at a reasonable cost. We can do the modification for --- \$40.00. plus postage, which is about \$2.00 within Australia.



JUNE 1986.

All prices are correct at time of printing, but may change without notice. All articles available while stocks last.  $\$ = \text{AUSTRALIAN \$}$ .  
All tape software includes postage up to four tapes.  
When ordering software, always state "which computer, VZ300 or VZ3000, if you have an expansion RAM unit, and if you have a disc drive system connected."

VZ1 = unexpanded VZ200.  
VZ2 = unexpanded VZ300.  
VZ3 = expanded VZ200.  
VZ4 = expanded VZ300.

IE, TB15 = Tape only unit of B15. DB5 = Disc only unit of B5.  
T/DE4 = Tape or Disc unit of E4. The price stated is for a Tape unit.  
If a Disc unit is required, add \$5.00 to the Tape price. The price of a Disc unit is as stated.

To allow faster service, send bank, building society, credit union cheques, or Post Office orders so that time is not wasted in waiting for a cheque to be cleared. We will soon offer to accept BANKCARD.  
Make cheques payable to J.D'ALTON or VSOFTWAREZ.

\*\*\* NEW SOFTWARE, \*\*\*

DB5 LE'VZ STATEMENT V2.0. \$185.00. VZ4.  
For small business use. Based on LE'VZ D'BASE. Random access records. Requires the Disc Drive System, a Printer and VZ DTR. Process and print end of month statements, labels, pay into account etc. All money calculations carried out IE. Debit, Paid in and Statement & totals. Comes with a 20 page instruction booklet. Write for more information or see a demonstration.

DB16 CHEQUE LEDGER DISC \$ 60.00. VZ3-VZ4.

A small business unit based on T/81 (CASHBOOK LEDGER) but for Disc operation only, in that all data is saved/loaded to/from Disc.

Type in date, Paid to, Cheque #, bank # and 12 other \$ columns. View data, correct (edit) data, printout of all data across two A4 sheets of paper by printing the left side then the right side. This allows an 80 column printer such as a Gripp or similar rather than an expensive wide business type.

Each "type in session" is saved to Disc, which is loaded in at the next session so that new data is typed in and merged. This is then saved to Disc. In this way the month's or period's file is built up ready to be printed at the close of the month/period.

At the close of that month/period, you type in the previous month's/period's running totals. All \$ totals are then calculated and printed at the bottom.

D/T19 COPY/PROTECT. \$ 30.00. VZ1-VZ4.

Incorporates two programmes BREAKPROOF and FILECOPIER. Using BREAKPROOF on Basic programmes produces versions which autoturn and will automatically restart, if the <BREAK> key is pressed. FILECOPIER allows the transfer of all Basic or Machine Code programmes to or from tape or disc.

DU20, DISC GUARD. \$ 60.00. VZ1-VZ4.

DISC GUARD prevents easy copying of programmes stored on Disc. IE. (COPY) and FILECOPIER cannot copy a DISK GUARDED Disc. Basic programmes are automatically BREAKPROOFED to produce an autoturn programme, which will rerun if the <BREAK> key is pressed. That programme cannot be effectively illited/listed.

DE1-8 EDUDISK. \$ 50.00. VZ3-VZ4.

Educational programmes E1 to E8 all on one Disc. It is as easy as 1-2-3 that a programme is selected by a single key press. Quite childproof.

T/DE9 MEATPIES V2. \$ 15.00. VZ3-VZ4. Year (grade) 5-7.

Similar to E3, but features additional graphics screens, more special events and provision for the "game" to be saved to tape. This allows the student/s to continue on where it was left before.

TU18, LOAD X800 FILES. \$ 7.95. VZ3-VZ4. This allows loading of System 80 and TRS 80 (1) tapes. It is up to the user to modify the programme to run on a VZ. Some simple programmes will run ok without any changes.

T/DG36 BLACKJACK. \$ 20.00. VZ3-VZ4.

The card game (Pontoon) can be played by 3 people. Good low RES graphics.

T/DG37, POKER MACHINE. \$ 20.00. VZ3-VZ4.

Another good low RES graphics game. See if you can break the bank.

T/DG38, WORDSQUARES. \$ 10.00. VZ2-VZ4.

The familiar game where you find words hidden in the maze of letters. You enter in the words and the VZ hides them for you. Very good.

T/DG39, COMPUTER MONOPOLY. \$ 15.00. VZ2-VZ4.

You play the VZ at the famous game.

T/DG40 TRIVIAL CULT. \$ 15.00. VZ2-VZ4.

An educational game where the computer selects randomly up to 100 questions to test your general knowledge. Could be an Educational unit. Suitable all ages.

T/DG41 SCOTLAND YARD, V2. \$ 15.00. VZ2-VZ4.

You find out "who dunit".

EXISTING SOFTWARE.

D/TU2	EDITOR/ASSEMBLER	#	20.00.	VZ3-VZ4.
D/TB1	CASH BOOK LEDGER	#	20.00.	VZ3-VZ4.
TU4	COLOUR GRAPHICS	#	10.00.	VZ3-VZ4.
D/TE1	KEYBOARD	#	8.00.	VZ1-VZ4.
D/TE2	WORDMATCHING	#	10.00.	VZ3-VZ4.
D/TE3	MEATPIES	#	10.00.	VZ3-VZ4.
D/TU3	UTILITIES	#	15.00.	VZ3-VZ4.
TU5	WEAVING DRAFTS	#	10.00.	VZ1-VZ4.
D/TE4	MATHS COUNTDOWN	#	10.00.	VZ3-VZ4.
D/TE5	COORDINATES	#	10.00.	VZ2-VZ4.
D/TE6	TOWER of HANOI	#	8.00.	VZ1-VZ4.
D/TE7	MICROSCOPE	#	8.00.	VZ3-VZ4.
D/TE8	BLOCK PUZZLER	#	10.00.	VZ1-VZ4.
TE20	PLUS and MINUS	#	6.50.	VZ1-VZ4.
TE24	MATHS	#	10.00.	VZ3-VZ4.
TE25	QUEENSLAND	#	6.50.	VZ1-VZ4.
TE27	EUROPEAN CAPITALS	#	6.50.	VZ1-VZ4.
TE30	CAMPING	#	6.50.	VZ1-VZ4.
D/TG2	MANSION and NOVA	#	12.50.	VZ1-VZ4.
MANSION... VZ3-VZ4. for NOVA				
D/TG3	VZ MONOPOLY.	#	12.50.	VZ3-VZ4.
TU12	SEARCHTAPE	#	10.00.	VZ1-VZ4.
D/TG13	SCOTLAND YARD	#	12.50.	VZ3-VZ4.
DB4	LE'VZ D'BASE	#	98.00.	VZ3-VZ4.
TB15	DATABASE-VZ	#	25.00.	VZ3-VZ4.
TG35	HAUNTED MANSION	#	12.50.	VZ3-VZ4.
TU6	VZ EXTENDED BASIC	#	15.00.	VZ1-VZ4.
TU7	PROTECT	#	14.95.	VZ3-VZ4.
TU8	CMERGE/DELETE/REN	#	12.50.	VZ3-VZ4.
TU9	MONITOR DEBUGGER	#	14.95.	VZ3-VZ4.
TU10	EXTENDED BASIC	#	12.50.	VZ3-VZ4.
TU11	ARRAY/RESTORE	#	14.95.	VZ3-VZ4.
You must have TU10 to use TU11.				
D/TU12	FILESEARCH	#	10.00.	VZ1-VZ4.



Below is a patch to enable your editor assembler to list its source code. As stated in the manual using option C.

First enter Insert mode by entering 'I'. Then set code origin by entering 'O'. Now type in the below program, pressing RETURN at the end of each line.

```

001      LD BC,0CH      ;Size of transfer is 12 bytes.
002      LD HL,LOOP     ;Point to new printer routine
003      LD DE,8F54H    ;Point to editor assembler print out
004      LDIR           ;Transfer routine to editor assembler
005      JP 7B00H       ;Return control to editor assembler
006 LOOP IN A,(00H)     ;Load printer status
007      BIT 0,A        ;Check ready bit
008      JR NZ,LOOP     ;Repeat LOOP if not ready
009      LD A,C         ;Load Accumalator with print data
010      OUT (0EH),A     ;Output data to printer port
011      OUT (0DH),A     ;Another port for an early interface
012      RET            ;Get next character
    
```

Now assemble the program by entering 'A'. Now RUN the program by entering 'R' then press 'Y' to verify you wish to execute the program. Finish up by deleteing the program by entering 'D\*'. Your editor assembler may list programs now, just by selecting option 'C'.(enter 'SC').

```

1      ;*** TEST PROGRAM 1 ***
2      ;
3      ; P.THURSBY 12/85
4      ;TO USE CHAR OUT ROUTINE
5      ;ON VZ300 COMPUTER.
6      SOUT EQU 33AH
7      CLR EQU 1C9H
8      EDIT EQU 7B00H
9      ;
10     ;SAVE ALL REGISTERS
11     STRT PUSH AF
12         PUSH DE
13         PUSH HL
14         PUSH BC
15         CALL CLR
16         POP BC
17         POP HL
18         POP DE
19         POP AF
20     ;NOW FOR SOUT ROUTINE
21     PUSH BC
22     LD B,255
23     LOOP LD A,24H
24         CALL SOUT
25         DJNZ LOOP
26         POP BC
27         JP EDIT
28     ;JUMP TO EDITOR/ASSEMBLER
29     ;ASSEMBLE AT "O <RET>"
30
    
```

To use a Printer with the D.S.E. Editor/Assembler.

There apparently is more than one version of the Ed/Ass. I do not have any trouble with mine and the GP100. The M/L routine sent by Peter Thursby some months ago gets around the problem. Jamie Perry of D.S.E. at the Sydney "hot line" sent me another routine which is the D.S.E. Technical Bulletin # 116, above.

\* \* NEXT LE/VZ \* \*  
 VZ200 and VZ300 memory map.  
 VZ video modifications Part one.  
 VARPTR Ext Basic Programming.  
 VZ Editor/Assembler tips.



# BINARY - DECIMAL CONVERSION

BY SCOTT LE BAUN

To understand how the binary system works, we must revert back to how the decimal system works.

FIGURE (1) - Decimal Place value

4	3	2	1	0
10	10	10	10	10
10000	1000	100	10	1

FIGURE (2)

The decimal number:-

$$\begin{array}{r}
 7428 \\
 7 \times 10^3 = 7000 \\
 + \\
 4 \times 10^2 = 400 \\
 + \\
 2 \times 10^1 = 20 \\
 + \\
 8 \times 10^0 = 8 \\
 \hline
 \Rightarrow 7428
 \end{array}$$

FIGURE (3) - Binary Place values

7	6	5	4	3	2	1	0
2	2	2	2	2	2	2	2
128	64	32	16	8	4	2	1

13 decimal = 1101 binary

Look up table and find highest number that can be divided into the number that you wish to convert.

$$\begin{array}{lcl}
 13 \div 8 = 1 \text{ remainder } 5 & - & 1 \\
 5 \div 4 = 1 \text{ remainder } 1 & - & 1 \\
 1 \div 2 = 0 \text{ remainder } 1 & - & 0 \\
 1 \div 1 = 1 & - & 1 \\
 \hline
 \Rightarrow 1101
 \end{array}$$

GOTO PAGE 7.

FIGURE (4)

The binary number:-

$$\begin{array}{r}
 10101 \\
 1 \times 2^4 = 16 \\
 + \\
 0 \times 2^3 = 0 \\
 + \\
 1 \times 2^2 = 4 \\
 + \\
 0 \times 2^1 = 0 \\
 + \\
 1 \times 2^0 = 1 \\
 \hline
 \Rightarrow 21
 \end{array}$$

SCOTT LE BAUN

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## SPEECH & MUSIC FROM YOUR VZ

Two types of peripheral device which can greatly expand the appeal of the VZ and enhance your interest in the machine (not to mention the enthusiasm that others will get for the computer) are VOICE and SOUND SYNTHESISERS. These are alternate and novel forms of sound output from the computer when one has tired of the entirely visual forms of output from the screen or printer. Music synthesis exceeds the capabilities of the VZ's inbuilt beeper.

A number of circuits and projects have appeared in the magazines over the past couple of years. This article briefly identifies these for those who may wish to build a board or alternatively register your interest with me so that we can make available these peripherals plus software off-the-shelf.

Imagine the blockbusting use of voice and music synthesis in games or applications.

A couple of introductory articles on speech synthesis appeared in BYTE Sep. 84 p.337 and I.T.E.C. #26 p.812. These are good background.

<u>Magazine</u>	<u>Date</u>	<u>Name</u>	<u>Chip</u>	<u>Interface</u>	<u>Software</u>
<u>VOICE</u>					
E.A.	Oct. 82	Compu-	Votrax	Centronics	Yes
	Apr. 83	voice	SC-01		
A.P.C.	Dec. 84	DIY voice	"	"	"
		synth.			
E.T.I.	Jan.85	Chatter-	"	"	"
	Apr.86	box			
E.T.I	Mar.86	Talking	GI	Parallel	No
		VZ-200	SP0256		
A.E.M.	Feb.86	Project	"	Centronics	Yes
		4504			
P.E.	Mar.85	BBC	"	Parallel	"
	Jun.85				
P.E.	Jan.86	Spectrum	"	"	"
<u>SOUND</u>					
A.P.C.	Nov.84	DIY music	TI	Centronics	"
		synth.	SN76496		
E.A.	Aug.83	Compu-	TI	"	"
		muse	SN76489		

So if you're tired of reading output from your computer how about LISTENING instead?

Copies available from Bob Kitch 7 Eureka St., KENMORE QLD. 4069

### VISIT TO DSE - SYDNEY

In April I was able to visit the Computer Support Group of DSE in North Ryde. I met Jamie Perry who is the Product Specialist for VZ computer equipment. Jamie is the fellow who answers the "hot line" enquiries on (02) 888-2002 (p.m. only).

I was shown some Public Domain software for the VZ, and drafts of three VZ-300 manuals being prepared for printing (a Technical Manual with an expanded DOS section, a new Giant Book of Games and a revised Further Book of Programming). A number of DSE-Technical Bulletins have also been written to clarify certain features of the VZ.

DSE also has a Product Development Group that can develop peripherals for the VZ if sufficient demand exists.

Any queries on the VZ can be addressed to DSE on the hot line number. Also indicate any further interests or problems you have with your VZ to DSE so that support for the machine can continue.

Bob Kitch 7 Eureka St., KENMORE QLD. 4069

Now that's how to convert from binary to decimal. Now comes the fun part - converting from decimal to binary!

FIGURE (5) - Powers of 2

N	2 <sup>N</sup>
0	1
1	2
2	4
3	8
4	16
5	32
6	64
7	128

CONTINUATION OF SCOTT LE BRUNS  
ARTICLE.

THE ONE THING I DON'T LIKE ABOUT AUTOMATIC MACHINES IS THAT THEY AUTOMATICALLY GO WRONG.....Marie D'Alton.

LEVZ#12 P7.







(a modification of Craig Milner's JOYSTICK DRAWER)

This modification of "joystick drawer" is very interesting. Rather than using 1 joystick, this program uses 2 controls.

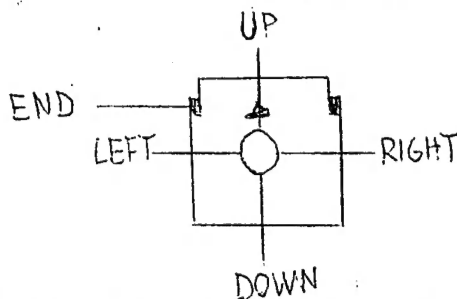
An added function lets your drawing be printed by a GP100.

```

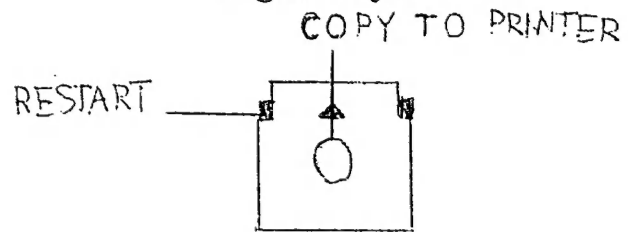
500 MODE(1)
501 A=(INP(43)AND31):B=(INP(46)AND31)
502 IFA=23ANDX<127THEN X=X+1
503 IFA=27ANDX>0THENX=X-1
504 IFA=30ANDY>0THENY=Y-1
505 IFA=29ANDY<63THENY=Y+1
506 IFA=15THENCLS:END
507 IFB=15THENGOTO500
508 IFB=30THENCOPY
509 SET(X,Y)
510 GOTO501
    
```

\*\*\*CONTROLS\*\*\*

Left Joystick



Right Joystick



## VZ EDITOR ASSEMBLER TIPS

TO ENTER HI-RES MODE (MODE(1)) IN ASSEMBLER LANGUAGE YOU HAVE TO SET BIT 3 OF ADDRESS 6800H(26625) TO 1.

FOR EXAMPLE:

LD A,(6800H);LOAD A WITH THE CONTENTS OF 6800H

OR 8 ;SET BIT 3 OF A TO 1

LD (6800H),A ; LOAD NEW INFORMATION BACK

LD (783BH),A ; INTO 6800H AND 783BH

IF YOU WANT TO CHANGE THE BACKGROUND COLOUR TO BUFF (NORMALLY ITS GREEN) INSTEAD OF [OR 8],AS ABOVE, CHANGE THAT TO OR 24 (SETTING BIT 4 TO 1).

(783BH) IS THE COPY OF (6800H). IT IS IMPORTANT TO LOAD A INTO (783BH)

IF YOU WANT TO USE THE SOUND DRIVER ROUTINE IN ROM,BECAUSE THE SDR DOES A READ (783BH) TO SEE WHAT MODE YOU ARE IN,AND LOADS THAT INTO (6800H).

TO CALL THE SOUND DRIVER ROUTINE

LD HL,FREQUENCY

CALL 345CH

BEFORE RETURNING BACK TO THE EDITOR ASSEMBLER USE THE PROGRAM BELOW TO CLEAR BIT 3 OF (783BH).IF YOU DON'T

THE SCREEN WILL CHANGE TO MODE(1) (HI-RES) WHEN YOU USE TAPE SAVE IN THE EDITOR ASSEMBLER.

LD A,(783BH)

AND 247

LD (783BH),A

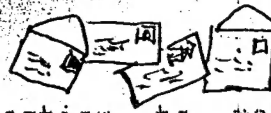
BY CAINE COESKI  
OF PERTH W.A

## SPEECH SYNTHESISER.

This five I/C circuit was sent by Dave Boyce. The speech I/C is a Tandy unit, but another I/C which is cheaper can be used. More about this later.

SEE PAGE 8.





Please take advantage of this section to make a comment or ask questions. I may not know all the answers, but someone else may. "It is better to be thought of as a fool for a few minutes, than be a fool forever."

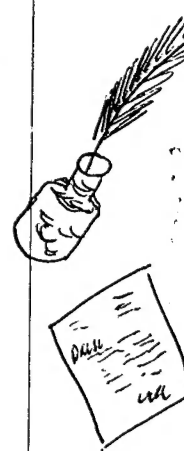
Dear Ed.,

The TRS-80/System-80 and Vic 20 computers are no longer sold or supported - having been superceded by newer machines. This fate awaits even the VZ'd! However, many happy Users are continuing to use their older hardware without trading up to new Gizmo's. How?

Both the TRS-80 and Vic-20 have strong User's Groups which continue to co-ordinate activities. But perhaps more importantly, the Groups had the foresight to centralize all software into a library system. The Vic-20 Club has around 900 programs and the TRS Club about 600 programs indexed and held in a library and accessible to Members at a nominal cost. I have done a lot of work centralizing and indexing magazine information for the benefit of VZ Users. My bibliography is attached to this newsletter. I am now trying to identify the various Users Groups Newsletters which have been circulated since 1983.

So how about writing to me if you have any Newsletters and sending along details of author and date of release etc.? How about letting me know of your ideas on starting a Central VZ Software Library?

Bob Kitch, 7 Eurella St., KENMORE QLD. 4069



Dear Editor,

I am currently building the Australian Electronics Magazine's speech synthesiser. Do you know anyone with software for it?  
Mr. David Mathews, RMB. 4330, SALE. VIC. 3850.

# CENTRONICS PIN CONNECTIONS.

The VZ connections at the Printer Plug (output of Printer interface) are not standard according to Grant Calhoun.

To conform to the standard Centronics connections, Pins 19 to 30 should be earthed. Earth should be removed from Pins 16 and 33.

PS I THINK THERE ARE VARIATIONS TO THIS EVEN.  
JD.

PIN	1	STROBE	PIN 13	N.C.	PIN 25	EMPTY
	2	D0	14	N.C.	26	EARTH
	3	D1	15	N.C.	27	EARTH
	4	D2	16	N.C.	28	EARTH
	5	D3	17	N.C.	29	EARTH
	6	D4	18	N.C.	30	EARTH
	7	D5	19	EARTH	31	N.C.
	8	D6	20	EARTH	32	N.C.
	9	D7	21	EARTH	33	N.C.
	10	N.C.	22	EARTH	34	N.C.
EN.	11	BUSY	23	EARTH	35	N.C.
	12	N.C.	24	EARTH	36	N.C.

BANKCARD and VISACARD NOW WELCOME



## PROGRAMMING.

Once you get to write long Programmes, you may have found that there are delays in a Programme when it is run. The screen (VDU) remains stationary, no READY or cursor. This is something that the books don't tell you.

ALWAYS use the CLEAR statement, then initialise all variables at the start of a Programme, BEFORE using the DIM statement. If you DIM at the start and somewhere in the Programme a variable (string or numeric) is introduced, the VZ has to first shift all the DIM areas to fit the new variable in.

To initialise a string variable just use a Pair of Quotation marks- IE B\$="".

To initialise a numeric variable just use an 0 (zero)- IE S=0.

Type in the three little Programmes, one at a time, and time them. The first is about 1 1/2 seconds. The second takes about 8 seconds and the third about 2 seconds. So you can see that about 6 seconds is saved in the third Programme.

```
1 REM JUST 'DIM'
5 CLS
10 PRINT"START":PRINT:PRINT
20 DIMA$(5000):DIMB$(5000)
100 PRINT"FINISHED"
```

The only people who  
brag about having been  
poor are the rich -

```
1 REM 'DIM' THEN INTRODUCE VARIABLES
5 CLS
10 PRINT"START":PRINT:PRINT
20 DIMA$(5000):DIMB$(5000)
30 A$="AAAAAAAAAAAAAAAAAAAA":D$="DDDDDDDDDDDDDD":C=123:G=1:H=5
100 PRINT"FINISHED"
```

```
1 REM INITIALISE ALL VARIABLES AT START OF PROGRAMME
5 CLS
8 A$="":D$="":C=0:G=0:H=0
10 PRINT"START":PRINT:PRINT
20 DIMA$(5000):DIMB$(5000)
30 A$="AAAAAAAAAAAAAAAAAAAA":D$="DDDDDDDDDDDDDD":C=123:G=1:H=5
100 PRINT"FINISHED"
```

### \* EDIT SLIP \*

I request all OOPs to complete this slip and return to me at your earliest. It is similar to the one I included in an earlier LE VZ. In particular the question as to whether you want YOUR name to be on the General List. If you answer NO, then your name and address will NOT be given out to OOPs when a list is printed. IE. of a list of NSW OOPs, DISC user OOPs and so on.

If you answer YES, or do not answer at all, you will automatically be put on the YES General List.

I do not give out Printouts of all OOPs on the G.L. as there are too many.

Surname.....Mr/Mrs/Miss and Christian name.....  
 Address.....Post Code ....  
 Computer. VZ200 and/or VZ300..... Any other computer .....  
 Printer and/or Plotter..... Disc System. yes/no .....  
 RAM Expansion. Yes/No ..K Tape Recorder. VZ DTR or other.....  
 Any other Peripherals. RTTY, Joysticks etc.....  
 Interest? Games, Business, Amateur Radio, M/L etc.....  
 .....Date.....

Do you want your name on the GENERAL LIST? yes/no...

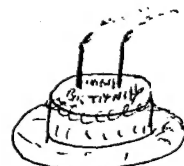


This program looks for a specified byte. Once it is found the program backspaces to the previous byte and then prints the address in HEX to the printer. The search covers the entire ROM and the DOS region. In this case I was searching for any references to the Communications Area of RAM between the addresses 7A00H and 7AFFH. BY LARRY TAYLOR.

```

001 CALL 3AE2H ;Do a carriage return
002 LD BC,6000H ;Number of bytes to be searched
003 LD HL,0000H ;Start of ROM area
004 RETN LD A,(HL) ;Load A with the byte in HL
005 CP 7AH ;Check to see if it is 7AH
006 JR NZ,NEXT ;If not go to next
007 PUSH BC ;Save number of bytes to search
008 PUSH HL ;Save current address being searched
009 DEC HL ;Go back one place
010 LD A,H ;Load A with the high byte
011 CALL HEX ;Convert the value to HEX and print it
012 LD A,L ;Load A with the low byte
013 CALL HEX ;Convert the value to HEX and print it
014 LD C,32 ;Load C with a space
015 CALL 058DH ;Print it
016 POP HL ;Recover the current address
017 POP BC ;Recover the number of bytes
018 NEXT INC HL ;Increase the current address by one
019 DEC BC ;Decrease the number of bytes by one
020 LD A,B ;Check to see if the
021 OR C ;contents of BC equals zero
022 JR NZ,RETN ;If not then continue search
023 CALL 3AE2H ;Do a carriage return
024 JP 31488 ;Return to Editor Assembler
025 HEX PUSH AF
026 RRCA
027 RRCA
028 RRCA
029 RRCA
030 CALL HEX2
031 POP AF
032 HEX2 AND 0FH
033 ADD A,30H
034 CP 7AH
035 JR C,DISP
036 ADD A,7
037 DISP PUSH HL
038 LD C,A
039 CALL 058DH
040 POP HL
041 RET

```



LE'VZ 200/300 OOP 2nd birthday.

In June 1984 I printed the first LE'VZ which consisted of only one A4 sheet. How it has grown in two years. This edition has more articles than ever. I hope you like it. For those who still wonder what "OOP" stands for, it means "Owners, Operators and Programmers". J.D'A.

Celestron Software.

Does anyone know what has happened to this firm? I spoke to John Halkiadakas about October 1985, and he appeared to be the firm's Principle. He advertised in Your Computer Oct 1985. He sent me a three page flier advertising a VZ Communications Package V1.0. Price \$370.00. The address was P.O. Box 31, HUNTINGDALE. Vic. 3166. Phone (03) 791 5850.

I have not heard from him since. The Telecom message says that the phone number is not connected. I just this minute tried it again. A couple of OOPs have sent money for programmes but have not received anything from the firm.

A WARNING. NEVER send money to a P.O. Box number. If anyone knows any more about this matter please let me know.